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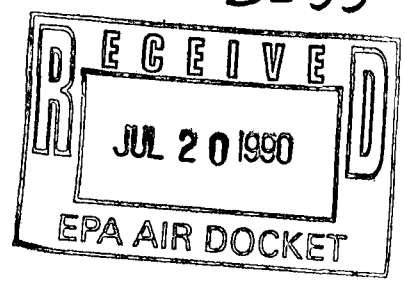

U.S. REFINING

July 17, 1990

Air Docket (LE-131) Of EPA
Room M-1500
401 M Street SW
Washington, D.C. 20460

Dear Air Docket, Administrator:

We are enclosing a copy of the NPRA Washington Bulletin dated June 26, 1990 with pertinent data of Ethyl Corporations's presentation to EPA of HiTEC 3000 as a gasoline octane enhancer.

We certainly support and recommend that this additive be approved for refiners to use to improve the octane of gasoline. It is a most positive way to conserve the value of crude oil and at the same time improve the air quality. We would appreciate your most thorough consideration of approval of this request from the Ethyl Corporation.

Sincerely,

U.S. Refining, L.P.

Forrest S. Fuqua

Forrest S. Fuqua
Vice President Refining

Enclosure:

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Washington Bulletin

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June 26, 1990

EPA Hears Testimony on Ethyl's MMT Waiver Request

On June 22, 1990, the U.S. Environmental Protection Agency conducted a public hearing to consider arguments for and against a request by the Ethyl Corporation for a waiver to allow refiners to use the gasoline additive methylcyclopentadienyl manganese tricarbonyl, or MMT. The manganese-based octane enhancer is commercially labelled by Ethyl as HiTEC 3000. It would be blended in unleaded gasoline in a concentration not to exceed 1/32 gram per gallon, improving the octane of the gasoline by about one (R+M)/2 octane number.

By statute, an applicant such as Ethyl has to satisfy EPA that use of its fuel additive "will not cause or contribute to a failure of any emission control device or system" to meet applicable emission standards. To meet this requirement, Ethyl provided EPA with the results of an extensive testing program conducted on 48 cars driven more than 3 million miles. Not only does the MMT additive not cause the automobile emission control system to fail, Ethyl said, it actually reduces nitrogen oxide (NOx) by an average of 20%, and total regulated pollutants 7.8%. Ethyl explains that NOx and carbon monoxide emission reductions occur because the effects of the additive are to reduce "engine out" NOx and CO, and because manganese dioxide (formed in the combustion process) acts as a catalyst, making the converter more efficient in removing NOx. "Ethyl has met the statutory standard," declared the company's representative at the EPA hearing.

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Speaking at the hearing against the waiver request was a representative of the Environmental Defense Fund (EDF). She devoted most of her testimony to drawing a comparison between the use of manganese in gasoline to the use of lead in gasoline. "The parallels" between the two, she said, "are chilling." She said manganese has a cumulative effect, just as lead does, and that it is, like lead, a neurotoxin. If manganese is permitted in automobile fuel, the EDF speaker argued, it will build up over time in urban dust and soils and be ingested by human beings. "We do not know a safe level for manganese," she warned. She seemed to be asking EPA to apply a new standard for waiver approval, one not found in the statute, when she proclaimed, "what's at stake here is not the health effects on emission control systems, but the health effect on humans."

A member of the EPA panel listening to the testimony reminded the EDF representative that manganese is typically found in a variety of food products, and that he had checked his vitamin supplement bottle that morning and found it, too, contained manganese.

The Ethyl representative explained that the amount of manganese that will be released into the atmosphere if the waiver is granted is minuscule. He said 99.9% of the additive is burned in the combustion process. A current model car using gasoline with MMT would release about 0.06 gram of manganese to the ambient air on an annual basis, he said, or only about 0.5 gram over the course of 100,000 miles of vehicle operation.

As a result, Ethyl says, the additive will have virtually no impact on ambient concentrations of manganese. United States urban areas have average airborne manganese levels of about 0.038 microgram per cubic meter. In a typical large urban area, the Ethyl representative explained, one could expect maximum increased ambient concentrations of about 0.001 microgra per cubic meter. By comparison, he said, EPA h estimated that "large point sources [such as steel mil and power plants] could cause maximum ambient mangan concentrations of over 100 micrograms per cubic met

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Ethyl challenged EDF's allegations as to the health effects of manganese usage. The company cited health reports from the government of Canada. Manganese is used in gasoline in Canada now. A special Royal Society of Canada Commission reported that the "additional exposure to manganese is well within the normal range represented by dietary variations." The company also pointed to a report by the United States EPA, saying manganese emissions at levels found today present no public health concerns, even at large point-source emitters such as steel mills and power plants.

Appearing at the hearing in favor of the waiver request was Dewey Mark, now retired from the petroleum refining and marketing industry. Use of HiTEC 3000, he said, will "allow the refiner to reduce the severity of reforming, a major octane-producing process, which in turn will reduce the aromatic content of gasoline as well as refinery emissions. Lowering the reformer severity also increases the amount of liquid products produced by the reformer, which in turn conserves crude oil." He said the United States could save 82,000 barrels of crude oil per day using MMT.

Mr. Mark continued, "Perhaps the most important benefit of HiTEC 3000 to the refining industry, as I see it, is the flexibility it gives the refiner in meeting octane quality specifications of gasoline." He emphasized the challenges refiners face as the federal government prepares to require reductions in vapor pressure and aromatics in gasoline. "Unfortunately, this action has a negative effect on the octane quality of the fuel," he said, arguing that Ethyl's additive can replace some of the lost octane, "especially for the small to medium size refineries which do not have as much flexibility as larger refineries."

Conspicuous by their absence from the hearing were the automobile manufacturers. The auto companies in the past have not been favorably disposed to the use of MMT as an additive. Ethyl believes it has satisfied the manufacturers' concerns, but to date the companies have not taken a public position on the recent waiver request.

[redacted]

[redacted]

Written comments on the Ethyl waiver request will be accepted by EPA until July 22, 1990. Comments may be addressed to U.S. Environmental Protection Agency, Public Docket A-90-16, Room M-1500, 401 M Street, SW, Washington, D.C. 20460, with copies to Mary T. Smith, Director, Field Operations and Support Division, (EN-397F), at the same street address. EPA has 180 days from the date the waiver was filed, or until November 5, 1990, to grant or deny the waiver. If the Agency has not acted by that time, the waiver is automatically granted.

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